



# **QATOL MANTA RAY MDCL 100**

Marine Cylinder Oil specially designed for the latest range of modern Low Speed 2-stroke Marine Diesel Engines using High Sulphur Heavy Fuel Oil (HFO)



### **PRODUCT DESCRIPTION:**

**QATOL MANTA RAY MDCL 100** is a high performance 100 BN SAE 50-cylinder lubricant optimized to combat the effects of cold corrosion, especially when slow steaming at low load, in new design two-stroke marine engines operating on heavy fuel oil. It is blended from highly refined, paraffinic base oils and carefully selected additives to provide excellent ring wear protection, liner wear protection and piston cleanliness in slow-speed crosshead engines. **QATOL MANTA RAY MDCL 100** has been developed specifically for high-pressure and high temperature applications.

### **APPLICATION:**

**QATOL MANTA RAY MDCL 100** is recommended for lubricating the cylinders of large low speed marine diesel engines operating with heavy fuel oil, especially when slow steaming at low load.

**QATOL MANTA RAY MDCL 100** is developed to be used for operating conditions and engine types which are sensitive to cold corrosion, and should be used in accordance with OEM guidelines and recommendations.

The feed rates recommended by the manufacturer should be maintained as the minimum. Higher feed rates may be required during running-in.

Periodic inspection of liner condition and scrape down analysis is essential to ensure continuous low wear rates. Switching from 70BN to 100BN cylinder oil is recommended where there is evidence of cold corrosion or when using the correct cylinder oil feed rate.

# **ADVANTAGES/BENEFITS:**

#### Wear Protection:

Ensures protection against excessive cylinder liner and piston ring wear resulting from the use of high Sulphur containing heavy fuel oils, thus allowing prolonged service intervals.

#### • Detergent-Dispersant Properties:

Prevents ring sticking and minimizes deposit formation throughout the combustion chamber exhaust areas.

## • Excellent Lubrication Properties:

Maintains an oil film under varying conditions, thereby reducing frictional wear and preventing scuffing of liners, pistons and rings.

## • Storage Stability:

Stable at ambient temperatures and during long-term storage.

### • Compatibility:

Miscible and compatible with single-phase alkaline diesel cylinder lubricants generally known to the international marine trade.

# **KEY PROPERTIES:**

PROPERTIES	TEST METHOD	TYPICAL VALUES	UNIT
Density @ 15 °C	ASTM D 4052	0.95	g/ml
Kinematic Viscosity @ 40 °C	ASTM D 445	206	mm²/s
Kinematic Viscosity @ 100 °C	ASTM D 445	19.5	mm²/s
Viscosity Index	ASTM D 2270	105	-
TBN	ASTM D 2896	100	mg KOH/g
Pour Point	ASTM D 97	-15	°C

AVAILABLE PACKAGES: 208L, 25L, 20L,

